

REMARKS

As a preliminary matter, Applicant appreciates the Examiner's indication that claim 5 will be allowed if written in independent form. Accordingly, Applicant has rewritten claim in independent form, and respectfully requests allowance of this claim.

Claims 1-4 and 6 stand rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (U.S. Patent No. 6,222,603). In response, Applicant amended independent claim 1 to clarify that the area located between the annular seal and the threshold pattern is provided with liquid crystal, and respectfully traverses.

Sakai is directed to a method of manufacturing a liquid crystal display device with a double seal. As shown in FIG. 4, Sakai has a seal pattern 6 and a dummy seal pattern 11. The seal pattern 6 for enclosing liquid crystal is formed by writing with a dispenser or by printing using a screen plate. The dummy seal pattern 11 having a continuous seal line enclosing the seal pattern 6 is formed to provide a more uniform gap during the process of attaching the substrates in the vacuum chamber. (Col. 5, lns. 25-32). The dummy seal pattern 11 functions to keep the space inside the seal pattern in a vacuum state while the vacuum chamber is leaked to atmospheric pressure and the seal patterns are cured, until the periphery portion of the empty cell is cut off. (Col. 5, lns. 11-12, 35-39).

However, Sakai fails to disclose or suggest having liquid crystal between the dummy seal pattern 11 and seal pattern 6. Rather, after the cell is filled with liquid crystal, the injection openings of the seal pattern 6 are sealed with resin. (Col. 5, lns. 20-21). Since the dummy seal pattern 11 is removed, liquid crystal cannot enter the seal pattern 6 after the seal pattern 6 is sealed. (See Claim 1, steps (g) and (h), for example). Accordingly, Sakai is

functionally unable to add liquid crystal to the pixel display area, unlike the present invention.

In the present application, an annular seal 18 is provided at the outside of the threshold pattern 24. Liquid crystal is provided within the threshold pattern 24 at an area 26, which is between the annular seal 18 and the threshold pattern 24. An opening 28 in the threshold pattern 24 facilitates the flow of liquid crystal to the pixel display area 20. (See FIG. 2). Thus, if liquid crystal within the pixel display area 20 is constricted, then liquid crystal is provided from the area 26. Conversely, if liquid crystal within the pixel display area 20 is expanded, then liquid crystal can flow into the area 26.


Advantageously, in both of the above scenarios, an evenness of the thickness of the cell can be prevented. Sakai cannot achieve this advantage because the dummy seal pattern 11 is removed. In contrast, the threshold pattern 24 of the present application remains upon completion of the manufacture of the liquid crystal display. Moreover, the opening 28 in the present application remains open upon completion of manufacturing, whereas Sakai has the seal pattern 6 permanently sealed upon completion of the manufacturing process. Since Sakai does not disclose or suggest an area provided with liquid crystal that is located between an annular seal and a threshold pattern, withdrawal of the § 102 rejection of claims 1-4 and 6 is respectfully requested.

New claims 7-8 are added and depend from claim 1 either directly or indirectly. Applicant respectfully submits that new claims 7-8 are in condition for allowance for the reasons recited above, and also because of the features that they recite.

For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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